REMARKS

In new claims 11-13, detecting an occurrence of a key-on event, of a played key, is supported at page 13, lines 10-13; determining whether the played key and the depressed key are in a specific relation which is set in advance, is supported at page 5, line 6; and generating a predetermined musical sound based on the specific relation between the played key and the depressed key is supported in the Abstract.

New claim 15 is supported by the last paragraph on page 17.

The new claims are patentable for the reasons below. In response to the Action:

§ 112, second paragraph. All claims were rejected under § 112, second paragraph. At the interview, the Examiner said that the rejection could be overcome by the present amendment of claim 1 and claim 4. Withdrawal of the rejection is requested.

The Examiner stated at the interview that claim 2 is being reconsidered but that this claim was confusing due to the term "monaural." "Monaural" is a synonym for "monophonic," which is defined as "of or pertaining to a sound-reproducing system that produces a single output signal" (Random House Dictionary).

Thus, "monaural" does not indicate a single loudspeaker, but rather a single sound channel (signal). Two speakers that have been coupled to a stereo amplifier can be made to output monaural sound, if connected so that the same signal is sent to both speakers simultaneously (for examples by coupling both the left channel amplifier output and the left channel amplifier output to each of the two speakers). Conversely, a single loudspeaker can output stereo sounds by being alternately coupled to the left channel and then to the right, while shuttling between the left and right speaker positions.

Many amplifiers include a "balance" control that shifts the sound amplitude proportion between the two stereo channels. The balance control does not affect whether the sound is stereophonic or monaural.

Some amplifiers also have a control for switching from stereo to mono reproduction, so that the two stereo inputs can be output as monaural sound to a single loudspeaker. In those amplifiers, with "mono" output to two speakers, the "balance" control cannot counteract the change from stereo to mono: the sound remains mono no matter where the balance is set.

Instant claim 2 recites "monaural resonance ... from left-and-right speakers" with volumes in accordance with the depressed key position." This describes something similar to the situation mentioned above, in which the amplifier is set to "mono" whereby both channels have the same signal, but the "balance" is adjusted to vary the *amplitude* of the single signal from each of two separated speakers. In claim 2, the "resonance" remains monaural.

Claims 2 and 5 are now amended to clarify the language. The Examiner is referred to page 16, line 22 to page 17, line 12 in the Applicant's specification.

§ 102. All of the claims are rejected over Kosecki. This rejection is respectfully traversed.

(a) The Examiner asserted that Kosecki's text at col. 4, line 60, reading "a player concurrently depresses a plurality of keys," refers to playing one key and then another, i.e., a "depressed" key and then a "played" key. However, this interpretation is contrary to the definition of "concurrent," which means, "occurring or existing together or side by side; *concurrent attacks*" (Random House Dictionary).

The case of one, and then another, which is urged by the Examiner, would accurately be described by a different word, "consecutively." *Simultaneous* keystrokes are what is described by "concurrently." The Examiner is invited to consider that in court, concurrent and consecutive jail terms have very different effects.

(b) Kosecki describes a case where the player "depresses more than one key" (col. 8, lines 32-38), without being more specific. However, neither here nor elsewhere is there any description of an interrelationships among depressed keys: that is, according to Kosecki, the sound when playing two keys is just the sum of the sounds from playing either of the two keys, and the sound-generating process for any one key is not affected by whether the other key has been played.

If the sound of a played key were different depending on whether or not another key were depressed, then Kosecki would have described this. But Kosecki does not mention it.

(c) The Examiner also invited to consider col. 4, line 53, stating that "tone generator 5g successively generates time slots selectively assigned to a plurality of tone generating channels," and also col. 4, line 64, reading, "The tone signals are mixed ... to form audio signal AD." This is illustrated in Fig. 2, where tone generator 5g is the entire apparatus of that figure and the channels 50, 5h, 5i, ... are the various inputs to the adder 5y.

These channels 50, 5h, 5i, are arranged in pairs and each pair is associated with a single keyboard key 1a (col. 5, lines 2-9). The channel 5h has a memory 501 that stores "fundamental tones" while the paired channel 5i has a memory 514 that stores "resonating sounds" (col. 5, lines 15-25 and col. 6, lines 19-25). A "fundamental tone" is a tone without any resonance (col. 5, lines 10-14). The "resonating sound" is the sound added to the "fundamental tone" when the

"damper pedal was fully depressed" (col. 6, lines 26-37). Thus, channels 5h and 5i differ in whether or not the damper pedal is depressed, and both relate to a *single* key.

The Examiner in invited to consider that the passage at the bottom of column 4 relates to the sounds from a single "depressed/released key 1a" (col. 5, line 6). It does not relate to the interaction between a single depressed key and a played key.

(d) The Examiner is next invited to consider the passage in column 10 and Fig. 7, which "illustrates the phase relation between the fundamental tones and the resonating sounds" (col. 7, line 30). This disclosure concerns "keys 1a [that] are selectively depressed," which arguably covers various different keys and not just one key. However, there is no disclosed interaction between various different individual keys. In Fig. 7 there is no overlap between the key status codes KC1-KC3: there is nothing graphed between times t25 and t26, nor is there anything graphed between t31 and t32. Therefore, the interactions graphed in Fig. 7 are entirely interactions between a single individual key and the damper pedal.

Claims 3 and 6. The applied text relates only to the attack on a single string.

New Claims. The new claims are patentable by the arguments above and previous.

Respectfully submitted,

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